

CLIPPEDIMAGE= JP404124844A

PAT-NO: JP404124844A

DOCUMENT-IDENTIFIER: JP 04124844 A

TITLE: STRUCTURE OF BONDING PAD ELECTRODE FOR
SEMICONDUCTOR DEVICE

PUBN-DATE: April 24, 1992

INVENTOR-INFORMATION:

NAME

MATSUMURA, KAZUO

ASSIGNEE-INFORMATION:

NAME

OKI ELECTRIC IND CO LTD

COUNTRY

N/A

APPL-NO: JP02243799

APPL-DATE: September 17, 1990

INT-CL (IPC): H01L021/60

ABSTRACT:

PURPOSE: To reduce the number of predetermined bonding pad electrodes and to simplify a wire bonding step by forming wirings near to each other to be common of one or more layers of wirings in a structure that the wirings are connected to each other by wirings used also as bonding pads thereon and through holes formed in an intermediate insulating film interposed therebetween.

CONSTITUTION: In a semiconductor device having wirings formed as a plurality of layers, wirings 26, 27 near to each other to be common of at least one layer of wiring are connected to each other by a wiring 23 used also as a bonding pad 25 thereon and a through hole 29 formed in an intermediate

insulating film 22'
interposed therebetween. Thus, even of the number of lead
electrodes is
increased, the number of pad electrodes can be reduced, and
an array of inner
active elements for reducing a semiconductor chip area and
an array of the pad
electrodes can be formed. Further, since the chip area can
be reduced, the
number of chips obtained from a wafer of finite size can be
increased. Since
the number of wire bindings is reduced, a wire bonding step
can be simplified.

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CLIPPEDIMAGE= JP401309340A

PAT-NO: JP401309340A

DOCUMENT-IDENTIFIER: JP 01309340 A

TITLE: SEMICONDUCTOR DEVICE

PUBN-DATE: December 13, 1989

INVENTOR-INFORMATION:

NAME

KIKUTA, SHIGERU

ASSIGNEE-INFORMATION:

NAME

MITSUBISHI ELECTRIC CORP

COUNTRY

N/A

APPL-NO: JP63141045

APPL-DATE: June 7, 1988

INT-CL (IPC): H01L021/60

US-CL-CURRENT: 257/784

ABSTRACT:

PURPOSE: To restrain a bonding wire from sliding by a method wherein an uneven part is formed on the surface of a wiring layer of a bonding pad and a bonding area with reference to the bonding wire is made large.

CONSTITUTION: An insulating layer 6 is formed on an insulating layer 4 including the surface top of an aluminum wiring layer 5; after that, a selective etching operation is executed in such a way that the wiring layer 5 is exposed at the insulating layer 6. An aluminum wiring layer 7 deposited on the wiring layer 5. Then, an uneven part by means of the wiring layer 7 is formed on the wiring layer 5. As a result, a contact area

with reference to a
bonding wire to be bonded is made large. By this setup, it
is possible to
restrain the bonding wire from sliding.

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CLIPPEDIMAGE= JP404056237A

PAT-NO: JP404056237A

DOCUMENT-IDENTIFIER: JP 04056237 A

TITLE: SEMICONDUCTOR DEVICE

PUBN-DATE: February 24, 1992

INVENTOR-INFORMATION:

NAME

NAKANE, JOJI

ASSIGNEE-INFORMATION:

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MATSUSHITA ELECTRON CORP

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N/A

APPL-NO: JP02167149

APPL-DATE: June 25, 1990

INT-CL (IPC): H01L021/60

US-CL-CURRENT: 29/879,438/624 ,438/FOR.355

ABSTRACT:

PURPOSE: To increase the bond strength of an input circuit pad part with a metallic wire by a method wherein a wire bonding pad formed of a polycide wiring is connected to a metallic wiring through contact windows provided in an interlayer insulating film to be further connected to a metallic wire on the metallic wiring.

CONSTITUTION: The title semiconductor device is provided with a wire bonding pad formed of a polycide wire 6 to be connected to a metallic wiring 3 through multiple contact windows 8 provided in an interlayer insulating film 7 and a metallic wire 5 connected to the metallic wiring 3. For

example, the polycide wiring 6 and the contact windows 8 connecting the metallic wiring 3 and the polycide wiring 6 with each other are provided beneath the metallic wiring pad 3 in an input circuit part. Through these procedures, the metallic wiring 3 will be taken in rugged shape by the contact windows 8 formed in the interlayer insulating film 7 as a lower layer so that the surface area of the upper and lower part of the metallic wiring 8 may be increased thereby enabling the bond strength between the metallic wiring 3 and the metallic wire 5 as well as the underneath interlayer insulating film 7 to be increased.

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